Sequence Listing

<110> TAMURA, Ryoji
<120> Non-B, Non-C, Non-G Hepatitis Virus Gene, Polynucleotide, Polypeptide, Virus Particle, Method for Isolating Virus Particle, and Method for Detecting Virus
<130> OP763-PCT
<150> JP 10-82962
<151> 1998-03-13
<150> JP 9-314196
<151> 1997-10-09
<150> JP 9-233246
<151> 1997-07-25
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<223> Synthetic DNA

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<220>
<223> Synthetic DNA

<400> 3
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<210> 4
<211> 20
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic DNA

<400> 4
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<210> 5
<211> 20
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic DNA

<400> 5

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<210> 6
<211> 24
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic DNA

<400> 6
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<210> 7
<211> 24
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic DNA

<400> 7
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<210> 8
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<212> DNA
<213> Artificial Sequence
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<223> Synthetic DNA

<400> 8
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<210> 9
<211> 770
<212> PRT
<213> non-B, non-C, non-G hepatitis virus

<400> 9

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Cys Arg Tyr Leu Gly Val Asn Leu Tyr Phe Phe Arg His Pro Asp
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Val Asp Phe Ile Ile Lys Ile Asn Thr Met Pro Pro Phe Leu Asp
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Tyr His Gly Gly Leu Tyr Ser Ser Ile Trp Leu Ser Pro Gly Arg
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Ser Tyr Phe Glu Thr Thr Gly Ala Tyr Thr Asp Ile Lys Tyr Asn
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Pro Phe Thr Asp Arg Gly Glu Gly Asn Met Leu Trp Ile Asp Trp
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Leu Ser Lys Lys Asn Met Asn Tyr Asp Lys Val Gln Ser Lys Cys
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Val Leu Glu Ala Leu Ala Gln Ser Gly Pro Phe Ala Tyr His Ser
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Cys Lys Glu Thr His Ser Ser Gly Asn Arg Val Pro Arg Ser Leu
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<213> non-B, non-C, non-G hepatitis virus

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35 40 45
Gly Gln Gly Ser Glu Lys Ser Met Phe Ile Gly Arg His Tyr Arg
50 55 60
Lys Lys Arg Ala Leu Ser Leu Cys Ala Val Arg Thr Thr Lys Lys
65 70 75
Ala Cys Lys Leu Leu Ile Val Met Trp Thr Pro Pro Arg Asn Asp
80 85 90
Gln His Tyr Leu Asn Trp Gln Trp Tyr Ser Ser Ile Leu Ser Ser
95 100 105
His Ala Ala Met Cys Gly Cys Pro Asp Ala Val Ala His Phe Asn
110 115 120
His Leu Ala Ser Val Leu Arg Ala Pro Gln Asn Pro Pro Pro Pro
125 130 135
Gly Pro Gln Arg Asn Leu Pro Leu Arg Arg Leu Pro Ala Leu Pro
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<210> 11
<211> 500
<212> DNA
<213> non-B, non-C, non-G hepatitis virus

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<223> Synthetic DNA

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<223> Synthetic DNA

<400> 13
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<210> 14

<211> 41
<212> DNA
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<223> Synthetic DNA

<400> 14
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<210> 15
<211> 41
<212> DNA
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<223> Synthetic DNA

<400> 15
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<212> DNA
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<213> non-B, non-C, non-G hepatitis virus

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<210> 19
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<223> Synthetic DNA

<400> 19

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<210> 20
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<210> 21
<211> 631
<212> DNA
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<220>
<223> Synthetic DNA

<400> 22
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<210> 23
<211> 20
<212> DNA
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<400> 23
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<210> 24
<211> 614
<212> DNA
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aaaaaaccgt cggc 614

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<211> 302
<212> DNA
<213> non-B, non-C, non-G hepatitis virus

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acactcagac gataccaact acccaggacc ctttgggggg ggtatgacta cagacaaatt 240
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cg 302

<210> 26

<211> 831
<212> DNA
<213> non-B, non-C, non-G hepatitis virus

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tgggcaaggc tctgaaaaaa gcatgtttat tggcaggcat tacagaaaga aaagggcgct 300
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tggaggaccc gaagacgcag acctgctaga cgccgtggcc gccgcagaaa cgtaaggaga 720
cgccgcagag gagggaggtg gaggaggaga tataggagat ggaaaagaaa gggcaggcgc 780
agaaaaaaag ctaaaataat aataagacaa tggcaaccaa actacagaag g 831

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<223> Synthetic DNA

<400> 27
atctacatct gggtgtctga 20

<210> 28
<211> 20
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic DNA

<400> 28
cgttagatgc tgtccagtag

<210> 29
<211> 20
<212> DNA

<213> Artificial Sequence
<220>
<223> Synthetic DNA

<400> 29
cgccacatat tagtacaggg 20

<210> 30
<211> 20
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic DNA

<400> 30
ccttctgtag tttggttgcc 20

<210> 31
<211> 467
<212> DNA
<213> non-B, non-C, non-G hepatitis virus

<400> 31
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ccctagacaa aagagcaaga tggataccta gcttaaaatc tagaccggga aaaaaacact 120
atattaaaat aagagtaggg gcaccaaaaa tgttcactga taaatggtac ccccaaacag 180
atctttgtga catggtgctt ctaactgtct atgcaaccgc agcggatatg caatatccgt 240
tcggctcacc actaactgac tctgtggttg tgaacttcca ggttctgcaa tccatgtatg 300
ataaaacaat tagcatatta ccagacgaaa aagaagaaag agcaaatcta cttaagcaga 360
taacaagtta cattcccttt tataatacca cacaaactat agcccaatta aagccattta 420
tagatgcagg caatgtaaca tcaagcacaa cagcaacaac atgggca 467

<210> 32
<211> 748
<212> DNA
<213> non-B, non-C, non-G hepatitis virus

<400> 32
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gcagcggtga agccacggag ggagatctcc gcgtcccgag ggcgggtgcc gaaggtgagt 180
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tgtgcgggtg tcccgacgct gtcgctcatt ttaatcatct tgcttctgtg cttcgtgccc 480
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tcccggctgc gccagaggcg cccggagata gagcaccatg gcctatggct ggtggcgccg 600
aaggagaaga cggtggcgca ggtggagacg cagaccatgg aggcgccgct ggaggacccg 660
aagacgcaga cctgctagac gccgtggccg ccgcagaaac gtaaggagac gccgcagagg 720
agggaggtgg aggaggagat ataggaga 748

<210> 33
<211> 197
<212> DNA
<213> non-B, non-C, non-G hepatitis virus

<400> 33
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ggagccgcgc gctacgcctt cggctgcgcg cggcacctca gacccccgct cgtgctgaca 120
cgctcgcgcg tgtcagacca cttcgggctc gcgggggtcg ggaaatttac taaacagact 180
ccgagttgcc attggac 197

<210> 34
<211> 20
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic DNA

<400> 34
tgcccatgtt gttgctgttg 20

<210> 35
<211> 20
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic DNA

<400> 35
ccatgcctcc ttttctagac 20

<210> 36
<211> 20
<212> DNA

<213> Artificial Sequence
<220>
<223> Synthetic DNA

<400> 36
tctcctatat ctcctcctcc 20

<210> 37
<211> 20
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic DNA

<400> 37
tcactaacca cgtgacaccc 20

<210> 38
<211> 20
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<213> Artificial Sequence
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<400> 38
aaagtaacta agcactccga 20

<210> 39
<211> 20
<212> DNA
<213> Artificial Sequence
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<400> 39
gtccaatggc aactcggagt 20

<210> 40
<211> 20
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic DNA

<400> 40
caccaggagc atatacagac 20

<210> 41
<211> 20
<212> DNA
<213> Artificial Sequence
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<400> 41
caaggtatgt tgcccgtttg 20

<210> 42
<211> 20
<212> DNA
<213> Artificial Sequence
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<223> Synthetic DNA

<400> 42
cgaaccacgt aacaaatggc 20

<210> 43
<211> 20
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic DNA

<400> 43
tgttgcccgt ttgtcctcta 20

<210> 44
<211> 20
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic DNA

<400> 44
ggcactagta aactgagcca 20

<210> 45
<211> 222
<212> DNA
<213> non-B, non-C, non-G hepatitis virus

<400> 45
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ccwctrtggg cagcagcata tggwtatgta gaattytgyg cwaaaagyac aggagacvva 120
aacagacaca tgaatgccag rctactaata agaagtccyt ttacagaccc vcarctavta 180
gtacacacag accccacwaa aggctttgtw ccytaytctk ta 222

<210> 46
<211> 222
<212> DNA
<213> non-B, non-C, non-G hepatitis virus

<400> 46
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ccyytrtgrg cctcwgtrta yggatwywcv gaatactgca gyaaagtwac aggagacwca 120
aacagagarc acaactgyag atgtgthaty agaagcccct ayacagtrcc wcarctgyta 180
gaycacaaca ayvscctyag rggwtaygtd ccvtayagya th 222

<210> 47
<211> 222
<212> DNA
<213> non-B, non-C, non-G hepatitis virus

<400> 47
ctagtaaaga cagactctag atatgacaag acacgcagca aatgccttat agaaaaacta 60
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aacagagaca tgaacgccag agtagttata aggagcccct acactacacc tcaaatgata 180
gaycacaaca ayvscctcag rggwtaygtd ccvtayagyt th 222

<210> 48
<211> 222
<212> DNA
<213> non-B, non-C, non-G hepatitis virus

<400> 48
ctatcaaaat cagacgccct ttacaccaaa ggacaaagca aatgtgaaat atttgactta 60
cccctctggg ccgccctaaa tggctacaca gaattctgct ccaaaagcac aggagacaca 120
gcaggacacc taaatgccag actagtgata agatgcccat acacataccc catgctagta 180

gaccactcaa acgacctaac aggctttgta ctgtacagca aa 222

<210> 49
<211> 222
<212> DNA
<213> non-B, non-C, non-G hepatitis virus

<400> 49
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ccactatggg cctccttctt tggatacgca gaattctgct ctaaaagcac aggagacaca 120
gccagagcat acaacgccag agtatgtgtt agatgtccct acacagagcc acagctgcta 180
aaccacaaca acccctctca ggggttcgtg ttttactcct ac 222

<210> 50
<211> 222
<212> DNA
<213> non-B, non-C, non-G hepatitis virus

<400> 50
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gccagactac tagactgcag agtatgtgtt agatgcccgt acacataccc tcagcttata 180
aaacacaaca atgacaactg gggctttgtc ccctatagcg aa 222

<210> 51
<211> 222
<212> DNA
<213> non-B, non-C, non-G hepatitis virus

<400> 51
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cccctatggg cctgtttcat gggataccag gactactgct cgaaacactt tcatgacgaa 120
ggcagaaaca aagaggccag agtcacaata atatccccat acacagaacc accactgacc 180
tcgaaagaca accactcaat gggattcata ccatatgact at 222

<210> 52
<211> 222
<212> DNA
<213> non-B, non-C, non-G hepatitis virus

<400> 52
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ggcctaccta aagaagtcag ggtcaccata cagtgtccat acacagatcc ccccctctat 180
gacaaagaca acacagacat gggctaccta ccttatgact ac 222

<210> 53
<211> 225
<212> DNA
<213> non-B, non-C, non-G hepatitis virus

<400> 53
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ccmytgtggg ccgccttytt yggctaccca gactacatag aragccarct aggcccytty 120
cargaycacg aractgtkgg catagtgttc gtgtgytgcc cctacactca rccrcccatg 180
tacaarccwg gcarvrtaca aamtggctay gttttctatg acact 225

<210> 54
<211> 225
<212> DNA
<213> non-B, non-C, non-G hepatitis virus

<400> 54
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cccctgtggg ccatgacctt tggatacagt gactatgtga gcacacaact aggcccaaac 120
gtggaccacg agactcaagg cctggtatgc agatctagtc cttacactga gccccccatg 180
tatgacaaga ctaacccaaa cagtggctac gtagcatatg acaca 225

<210> 55
<211> 23
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic DNA

<400> 55
tggtggcgcc gaaggagaag acg 23

<210> 56
<211> 20
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic DNA

<400> 56

gctcttatgt acctcctgcg 20

<210> 57
<211> 20
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic DNA

<400> 57
tttgctacgt cactaaccac 20

<210> 58
<211> 20
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic DNA

<400> 58
gtagaccatg aaacagcagg 20

<210> 59
<211> 20
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<220>
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<400> 59
tcaaccacct atgtatgaca 20

<210> 60
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<400> 60
gccgacggtt ttttggcgcc tttttc 27

<210> 61

<211> 20
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<400> 61
aaagaggaag gaagtcagcc 20

<210> 62
<211> 3722
<212> DNA
<213> non-B, non-C, non-G hepatitis virus
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<222> 590..2872
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<400> 62
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<210> 63

<211> 761
<212> PRT
<213> non-B, non-C, non-G hepatitis virus

<400> 63

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Thr Arg Arg Ala Val Arg Gly Leu Gly Arg Arg Arg Lys Pro Arg
                35                  40                  45
Val Arg Arg Arg Arg Arg Thr Arg Arg Arg Thr Tyr Arg Arg Gly
                50                  55                  60
Trp Arg Arg Arg Arg Tyr Ile Arg Arg Gly Arg Arg Lys Lys Lys
                65                  70                  75
Leu Ile Leu Thr Gln Trp Asn Pro Ala Ile Val Lys Arg Cys Asn
                80                  85                  90
Ile Lys Gly Gly Leu Pro Ile Ile Ile Cys Gly Glu Pro Arg Ala
                95                 100                 105
Ala Phe Asn Tyr Gly Tyr His Met Glu Asp Tyr Thr Pro Gln Pro
               110                 115                 120
Phe Pro Phe Gly Gly Gly Met Ser Thr Val Thr Phe Ser Leu Lys
               125                 130                 135
Ala Leu Tyr Asp Gln Tyr Leu Lys His Gln Asn Arg Trp Thr Phe
               140                 145                 150
Ser Asn Asp Gln Leu Asp Leu Ala Arg Tyr Arg Gly Cys Lys Leu
               155                 160                 165
Arg Phe Tyr Arg Ser Pro Val Cys Asp Phe Ile Val His Tyr Asn
               170                 175                 180
Leu Ile Pro Pro Leu Lys Met Asn Gln Phe Thr Ser Pro Asn Thr
               185                 190                 195
His Pro Gly Leu Leu Met Leu Ser Lys His Lys Ile Ile Ile Pro
               200                 205                 210
Ser Phe Gln Thr Arg Pro Gly Gly Arg Arg Phe Val Lys Ile Arg
               215                 220                 225
Leu Asn Pro Pro Lys Leu Phe Glu Asp Lys Trp Tyr Thr Gln Gln
               230                 235                 240
Asp Leu Cys Lys Val Pro Leu Val Ser Ile Thr Ala Thr Ala Ala
               245                 250                 255
Asp Leu Arg Tyr Pro Phe Cys Ser Pro Gln Thr Asn Asn Pro Cys
               260                 265                 270
Thr Thr Phe Gln Val Leu Arg Lys Asn Tyr Asn Thr Val Ile Gly
               275                 280                 285
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Thr Ser Val Lys Asp Gln Glu Ser Thr Gln Asp Phe Glu Asn Trp
                290                 295                 300
Leu Tyr Lys Thr Asp Ser His Tyr Gln Thr Phe Ala Thr Glu Ala
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Gln Leu Gly Arg Ile Pro Ala Phe Asn Pro Asp Gly Thr Lys Asn
                320                 325                 330
Thr Lys Gln Gln Ser Trp Gln Asp Asn Trp Ser Lys Lys Asn Ser
                335                 340                 345
Pro Trp Thr Gly Asn Ser Gly Thr Tyr Pro Gln Thr Thr Ser Glu
                350                 355                 360
Met Tyr Lys Ile Pro Tyr Asp Ser Asn Phe Gly Phe Pro Thr Tyr
                365                 370                 375
Arg Ala Gln Lys Asp Tyr Ile Leu Glu Arg Arg Gln Cys Asn Phe
                380                 385                 390
Asn Tyr Glu Val Asn Asn Pro Val Ser Lys Lys Val Trp Pro Gln
                395                 400                 405
Pro Ser Thr Thr Thr Pro Thr Val Asp Tyr Tyr Glu Tyr His Cys
                410                 415                 420
Gly Trp Phe Ser Asn Ile Phe Ile Gly Pro Asn Arg Tyr Asn Leu
                425                 430                 435
Gln Phe Gln Thr Ala Tyr Val Asp Thr Thr Tyr Asn Pro Leu Met
                440                 445                 450
Asp Lys Gly Lys Gly Asn Lys Ile Trp Phe Gln Tyr Leu Ser Lys
                455                 460                 465
Lys Gly Thr Asp Tyr Asn Glu Lys Gln Cys Tyr Cys Thr Leu Glu
                470                 475                 480
Asp Met Pro Leu Trp Ala Ile Cys Phe Gly Tyr Thr Asp Tyr Val
                485                 490                 495
Glu Thr Gln Leu Gly Pro Asn Val Asp His Glu Thr Ala Gly Leu
                500                 505                 510
Ile Ile Met Ile Cys Pro Tyr Thr Gln Pro Pro Met Tyr Asp Lys
                515                 520                 525
Asn Arg Pro Asn Trp Gly Tyr Val Val Tyr Asp Thr Asn Phe Gly
                530                 535                 540
Asn Gly Lys Met Pro Ser Gly Ser Gly Gln Val Pro Val Tyr Trp
                545                 550                 555
Gln Cys Arg Trp Arg Pro Met Leu Trp Phe Gln Gln Gln Val Leu
                560                 565                 570
Asn Asp Ile Ser Lys Thr Gly Pro Tyr Ala Tyr Arg Asp Glu Tyr
                575                 580                 585
Lys Asn Val Gln Leu Thr Leu Tyr Tyr Asn Phe Ile Phe Asn Trp
                590                 595                 600
Gly Gly Asp Met Tyr Tyr Pro Gln Val Val Lys Asn Pro Cys Gly
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Gln Val Val Ser Pro Leu Ser Met Gly Pro Ala Tyr Ile Phe His
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Tyr Phe Asp Ser Arg Arg Gly Phe Phe Ser Glu Lys Ala Leu Lys
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Arg Met Gln Gln Gln Gln Glu Phe Asp Glu Ser Phe Thr Phe Lys
                665                 670                 675
Pro Lys Arg Pro Lys Leu Ser Thr Ala Ala Ala Glu Ile Leu Gln
                680                 685                 690
Leu Glu Glu Asp Ser Thr Ser Gly Glu Gly Lys Ser Pro Leu Gln
                695                 700                 705
Gln Glu Glu Lys Glu Val Glu Val Leu Gln Thr Pro Thr Val Gln
                710                 715                 720
Leu Gln Leu Gln Arg Asn Ile Gln Glu Gln Leu Ala Ile Lys Gln
                725                 730                 735
Gln Leu Gln Phe Leu Leu Leu Gln Leu Leu Lys Thr Gln Ser Asn
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<210> 64
<211> ~~165~~ 156
<212> PRT
<213> non-B, non-C, non-G hepatitis virus

<400> 64

```
Met His Phe Arg Arg Val Arg Ala Lys Arg Lys Leu Leu Leu Gln
  1               5                  10                  15
Ala Val Arg Ala Pro Pro Lys Ala Pro Ala Met Ser Phe Thr Thr
                20                  25                  30
Pro Thr Ile Asn Ala Gly Ile Arg Glu Gln Gln Trp Phe Glu Ser
                35                  40                  45
Thr Leu Arg Ser His His Ser Phe Cys Gly Cys Gly Asp Pro Val
                50                  55                  60
Leu His Phe Thr Asn Leu Ala Thr Arg Phe Asn Tyr Leu Pro Ala
                65                  70                  75
Thr Ser Ser Pro Leu Asp Pro Pro Gly Pro Ala Pro Arg Gly Arg
                80                  85                  90
Pro Ala Leu Arg Arg Leu Pro Ala Leu Pro Ser Ala Pro Ala Thr
                95                 100                 105
Pro Ser Arg Glu Leu Ala Trp Pro Thr Gly Ser Glu Gly Gly Ala
```

```
                  110                 115                 120
Gly Gly Arg Gly Ala Gly Gly Glu Gly Gly Ala Ala Val Glu Gly
                  125                 130                 135
Asp Tyr Arg Glu Glu Glu Leu Asp Glu Leu Phe Ala Ala Leu Glu
                  140                 145                 150
Glu Asp Ala Asn Gln Gly
                  155
```